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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,967	12/27/2001	Dale E. Gulick	5500-73600	9316

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EXAMINER

PATEL, NIKETA I

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 10/17/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,967

Applicant(s)

GULICK ET AL.

Examiner

Niketa I. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 7, 8, 16, 17, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification fails to provide detailed description of a **HyperTransport™**. The Examiner kindly, requests further explanation of the **HyperTransport™** including the generic components that comprise the **HyperTransport™**.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 7, 8, 16, 17, 24 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7, 8, 16, 17, 24 and 25 contain the trademark/trade name **HyperTransport™**. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to

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identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe Lightning Data Transport and, accordingly, the identification/description is indefinite.

Specification

5. The disclosure is objected to because of the following informalities: the specification fails to provide detailed description of a **HyperTransport**™. The Examiner kindly, requests further explanation of the **HyperTransport**™ including the generic components that comprise the **HyperTransport**™. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 9-15, 18-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ajanovic et al. U.S. Patent Number: 6,516,375 (herein after referred to as "*Ajanovic*".)

9. **Referring to claims 1, 10, and 19,** *Ajanovic* teaches an input/output node for a computer system, the input/output node comprising: a processing node including one or more processors [see figure 1 – elements, 102, 104, 106, 108, 110]; a transceiver unit implemented on an integrated circuit chip, wherein the transceiver unit is configured to receive and transmit packets on a point-to-point link of a packet interface [see column 3 – lines 35-67; column 4 – lines 1-44; figure 1 – elements 140, 142, 143]; a graphics engine implemented on the integrated circuit chip, wherein the graphics engine is coupled to receive graphics packets received by the transceiver unit and is configured to render digital image information in response to receiving the graphics packets [see column 2 – lines 50-67; column 3 – lines 1-33; figure 1 – elements 120, 124, 125]; and an I/O hub implemented on the integrated circuit chip, wherein the I/O hub is coupled to receive I/O packets corresponding to packets received by the transceiver unit and is configured to initiate bus cycles corresponding to the I/O packets upon a peripheral bus [see column 2 – lines 50-67; column 3 – lines 1-33, 55-67; column 4 – lines 1-44; figure 1 – elements 140.] Although *Ajanovic* teaches interfacing means to connect various peripherals to allow exchange of information [see column 4 – lines 16-44], *Ajanovic* is silent about using a transceiver to receive and transmit information to and from the peripherals.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that a transceiver was an old and well-known type of element used to transmit and receive information in the computer art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement *Ajanovic's* system with a transceiver to allow exchange of information and save chip area by combining transmitter and a receiver.

10. **Referring to claims 2, 11, and 20**, teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches an interface unit implemented on the integrated circuit chip, wherein the interface unit is coupled to the transceiver unit and is configured to convey packets between the transceiver unit and each of the graphics engine and the I/O hub [see column 2 – lines 50-67; column 3 – lines 1-33, 55-67; column 4 – lines 1-44.]

11. **Referring to claims 3, and 12**, teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches to comprise a graphics bus interface implemented on the integrated circuit chip, wherein the graphics bus interface is coupled to receive and to translate the graphics packets into graphics commands suitable for transmission upon a graphics bus [see column 6 – lines 10-56; column 2 – lines 50-67; column 3 – lines 1-33, 55-67; column 4 – lines 1-44.]

12. **Referring to claims 4, 13, and 21** teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches that the I/O hub is further configured to receive peripheral transaction bus cycles from the peripheral bus and to transmit packets corresponding to the peripheral transaction bus cycles to the transceiver unit [see column 3 – lines 55-67; column 4 – lines 1-44.]

13. **Referring to claims 5, 14, and 22**, teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches that the graphics engine includes a configuration register,

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wherein the configuration register provides a user selectable bit for enabling and disabling the graphics engine [see column 15 – lines 65-67; column 16 – lines 1-9.]

14. **Referring to claims 6, 15, and 23**, teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches that the graphics engine is further configured to translate the digital image information into packets suitable for transmission upon the point-to-point link of a packet interface [see column 6 – lines 10-56; column 2 – lines 50-67; column 3 – lines 1-33, 55-67; column 4 – lines 1-44.]

15. **Referring to claims 9, 18, and 26**, teachings of *Ajanovic* as modified and applied to claims 1, 10, and 19 above teaches that the I/O hub is coupled to receive the I/O packets via an internal packet bus [see column 2 – lines 50-67; column 3 – lines 1-33, 55-67; column 4 – lines 1-44.]

16. As far as the Claims 7, 8, 16, 17, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable *Ajanovic* et al. U.S. Patent Number: 6,516,375 (herein after referred to as “*Ajanovic*”) as applied to claims 1, 10 and 19 above, and further in view of Hayter et al. U.S. Patent Number: 6,574,708 (herein after referred to as “*Hayter*”).

17. **Referring to claim 7, 8, 16, 17, 24 and 25**, wherein the point-to-point link of a packet interface is a point-to-point *HyperTransport*[™] link including a first set of unidirectional wires and a second set of uni-directional wires each configured to convey packets including control packets and data packets, wherein the control packets include command packets, info packets and response packets and wherein the control packets and data packets share the same wires and the I/O hub is coupled to receive the I/O packets via a link. *Ajanovic* is silent on the point-to-

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point link being a *HyperTransport*TM link, however *Hayter* teaches a use of a *HyperTransport*TM link to transfer data between an I/O hub and peripherals connected there too.

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the point-to-point link of *Ajanovic* to be a *HyperTransport*TM link, too increase flexibility and to allow a user to connect various types of peripherals to a computer system. It is for this reason that one of ordinary skill in the art would have been motivated to substitute *Ajanovic*'s point-to-point link with a *HyperTransport*TM link, to allow one to increase the flexibility of a computer system by allowing connection of various types of peripherals.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to a computer system with a graphics engine and I/O hub.

Watson et al. U.S. Patent Number: 6,466,226

Harriman et al. U.S. Patent Number: 6,496,895

Chan et al. U.S. Patent Number: 5,978,860

Chen et al. U.S. Patent Number: 6,052,805

Harriman et al. U.S. Patent Number: 6,560,666

MacInnis et al. U.S. Patent Number: 6,630,945

Young et al. U.S. Patent Number: 5,831,637


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (703) 305 4893. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (703) 308 3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305 3900.

NP


JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100